

REMARKS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-30 and 41-56 are currently pending, with Claims 51 and 52 being withdrawn as directed to non-elected inventions. Claims 1, 11, 21, and 41 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, Claims 1-30, 41-50, and 53-56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0202193 to Yokochi (hereinafter “the ‘193 application”) in view of U.S. Patent Application Publication No. 2003/0081265 to Watanabe (hereinafter “the ‘265 application”).

Amended Claim 1 is directed to an image processing apparatus for generating graphics data according to picture description instructions based on original image data of full color, comprising: (1) a chromatic tester configured to determine whether a pixel of the original image data is chromatic or achromatic; (2) an obtainer configured to determine whether an image property of the pixel indicates the pixel is characteristic of a photograph, **when** the pixel is determined as achromatic by the chromatic tester; (3) a color converter configured to convert the pixel into CMYK data for printing according to one of a plurality of predetermined converting conditions; and (4) a converting condition designator configured to designate (a) a first one of the predetermined converting conditions for the pixel determined as chromatic, (b) a second one of the predetermined converting conditions when the pixel is determined as achromatic **and** the image property of the pixel indicates the pixel is not characteristic of a photograph, the second one of the predetermined converting conditions being different from the first one of the predetermined converting conditions, and (c) the first one of the predetermined converting conditions when the pixel is determined as achromatic

**and** the image property of the pixel indicates the pixel is characteristic of a photograph. The changes to Claim 1 are supported by the originally filed specification and do not add new matter. In particular, Claim 1 has been amended to clarify that the second one of the predetermined converting conditions is different from the first one of the predetermined converting conditions. No new matter has been added.

Regarding the rejection of Claim 1 under 35 U.S.C. § 103(a), the Office Action asserts that the '193 application discloses everything in Claim 1 with the exception of "a second one of the predetermined converting conditions when the pixel is determined as achromatic and the image property of the pixel indicates that the pixel is not characteristic of a photograph, and the first one of the predetermined converting conditions when the pixel is determined as achromatic and the image property of the pixel indicates that the pixel is characteristic of a photograph,"<sup>1</sup> and relies on the '265 application to remedy those deficiencies.

The '193 application is directed to an image processing device configured to determine whether or not a subject pixel is achromatic by judging the chroma component of a judgment pixel. Further, the '193 application discloses that a code indicating that the judgment pixel is on a black pixel is added to those pixels that are determined to be achromatic, including fine line pixels and edge pixels. As shown in Figure 7, the '193 application discloses that, in the process of converting RGB data, the system executes black character detection processing, a color conversion processing, and a black generation processing. As shown in Figure 8, the '193 application discloses that, if the black code is present for the pixel, the CMYe data is replaced with K data for printing the pixel in black monochrome ink only. Otherwise, the '193 application discloses that CMYK data is generated from the initial CMYe data. Thus, the '193 application discloses that if the pixel

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<sup>1</sup> See page 3 of the outstanding Office Action.

detection processing S11 determines that a subject pixel is an achromatic pixel, then the generation processing step S15 determines K data from printing the pixel in monochrome ink only, while if the black character detection processing S11 does not determine that the pixel is an achromatic pixel, CMYK data is determined for the pixel.

However, Applicants respectfully submit that the '193 patent fails to disclose an obtainer configured to determine whether an image property of the pixel indicates that the pixel is characteristic of a photograph, **when** the pixel is determined as achromatic by the chromatic tester, as recited in Claim 1. Applicants respectfully submit that the '193 patent is silent regarding determining whether an image property for a pixel indicates that the pixel is characteristic of a photograph, and does not disclose the conditional nature of this step, as required by Claim 1.

Further, as admitted in the outstanding Office Action, the '193 application fails to disclose a converting condition designator configured to designate (1) a first one of the predetermined converting conditions for the pixel determined as chromatic, (2) a second one of the predetermined converting conditions when the pixel is determined as achromatic **and** the image property of the pixel indicates the pixel is not characteristic of a photograph, and (3) the first one of the predetermined converting conditions when the pixel is determined as achromatic **and** the image property of the pixel indicates the pixel is characteristic of a photograph, as recited in amended Claim 1.

The '265 application is directed to an image forming apparatus that includes a CCD sensor signal processor 4000, a scanner image processor 5000, an image handling section 6000, and a printer image processor 7000. In particular, as shown in Figure 7, the '265 application discloses a color converter 8002, a photograph region identification section 8003, and a color region identification section 8004. Further, the '265 application discloses that the photograph region identification section outputs a value Sp for each pixel, which indicates

whether or not the pixel is part of a photograph. Further, the '265 application discloses that the color region identification section 8004 outputs a value  $S_c$ , which indicates whether the pixel is in a color region. Further, the '265 application discloses various embodiments in which the  $S_p$  and  $S_c$  values are used to process various regions of an image that may include different types of regions, such as photographs, color regions, and black and white regions. For example, see '265 Figure 8, which shows an image synthesizer 9014 that synthesizes an image based on the component regions. See also Figures 16-22, which illustrates the various possible regions in an image. In particular, Figures 19 and 22 show values for the  $S_p$  variable, which indicates the region containing a photograph.

However, Applicants respectfully submit that the '265 application fails to disclose the converting condition designator recited in amended Claim 1. In particular, while the '265 application discloses the detection of color and photographic regions, and various processing for those regions separately, the '265 application does not disclose the detection of the combination of regions recited in Claim 1. For example, Claim 1 requires determining that a pixel is both achromatic **and** that the image property of the pixel indicates that the same pixel is not characteristic of a photograph. **Applicants respectfully submit that the '265 application fails to disclose the detection of such a pixel having these combined properties.** Rather, the '265 application merely discloses individually determining a photographic region and a color region. In this regard, Applicants note that the '265 application fails to disclose an obtainer configured to determine whether an image property of the pixel indicates the pixel is characteristics of a photograph, **when** the pixel is determined as achromatic by the chromatic tester, as recited in Claim 1. Applicants note that the function of the obtainer is conditional upon the pixel being determined as achromatic by the chromatic tester. Applicants submit that the '265 application does not disclose the conditional nature of

the step, but discloses that the pixels are separately evaluated to determine the color region and the photographic region automatically.

Further, as discussed above, the '265 application does not disclose that a particular converting condition is designated when a pixel is determined as achromatic and an image property of the pixel is not characteristic of a photograph, while a different predetermined converting condition is designated when the pixel is determined as achromatic and image property of the pixel indicates the pixel is characteristic of a photograph, as required by Claim 1.

Further, Applicants note that Claim 1 requires that the same predetermined converting condition (the first one) is designated for both chromatic pixels, as well as for achromatic pixels that are characteristic of a photograph. See the converting condition designator recited in Claim 1. Applicants respectfully submit that the '265 application does not teach or suggest that the same converting condition is designated for chromatic pixels and achromatic pixels that are characteristic of a photograph. Rather, the '265 application merely discloses separate processing for photographic regions, color regions, and black and white regions. The '265 application does not teach or suggest the combined chromatic/photographic conditions recited in Claim 1, nor does it teach or suggest applying the same predetermined converting conditions to chromatic pixels as well as to achromatic pixels that are also part of a photograph, as required by Claim 1.

Thus, no matter how the teachings of a '265 and '193 applications are combined, the combination does not teach or suggest a converting condition designator configured to designate a first one of the predetermined converting conditions for the pixel determined as chromatic, a second one of the predetermined converting conditions when the pixel is determined as achromatic and an image property of the pixel indicates that the pixel is not characteristic of a photograph, the second one of the predetermined converting conditions

being different from the first one of the predetermined converting conditions, and the first one of the predetermined converting conditions when the pixel is determined as achromatic and the image property of the pixel indicates the pixel is characteristic of a photograph, as recited in Claim 1. Accordingly, Applicants respectfully traverse the rejection of Claim 1 (and all associated dependent claims) as being unpatentable over the '265 and '193 applications.

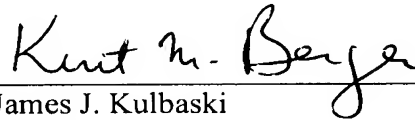
Independent Claim 11 is also directed to an image processing apparatus that includes converting condition designated means for designation various predetermined converting conditions, similar to that recited in Claim 1. As discussed above, the combined teachings of the '265 and '193 applications fail to disclose these limitations.

Claim 21 is directed to a graphics data processing method, while Claim 41 is directed to a computable readable medium storing instructions for causing a computer to perform an image processing method, the method comprising steps similar to those recited in Claim 21. As discussed above, the combined teachings of the '265 and '193 applications fail to disclose the designation of the predetermined converting conditions. Accordingly, Applicants respectfully submit that Claims 21 and 41 (and all associated dependent claims) patentably define over any proper combination of the '265 application and the '193 application.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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